What is claimed is:

1. A plate for projection lithography comprising:

a first opaque region located at the center of the plate; and

a second opaque region formed at an outer edge of the plate, said first and second opaque regions defining an annular region therebetween, said annular region being light transmissive and comprising a first light transmissive area that imparts a first phase shift to light passing therethrough and a second light transmissive area, which imparts a second phase shift to light passing therethrough.

2. The plate of Claim 1 wherein said first light transmissive area comprises two opposed regions being substantially vertically oriented and on opposed portions of said annular region.

3. The plate of Claim 1 wherein said second light transmissive area comprises two opposed regions being substantially horizontally oriented and on opposed portions of said annular region..

4. The plate of Claim 1 wherein said second phase shift differs from said first phase shift by between 45 degrees and 315 degrees.

5. The plate of Claim 4 wherein said second phase shift differs from said first phase shift 180 degrees.

6. The plate of Claim 1 wherein said first light transmissive area has a first thickness and said second light transmissive area has a second thickness and the difference between said first and second light transmissive areas is equal to $1/(2n_{ref})$ wavelengths of an illuminating light source.

7. A plate for projection lithography comprising:

an opaque region; and

a first, second, third, and fourth light transmissive region formed around the periphery of said plate, said first and second light transmissive regions substantially vertically oriented and oppositely located and imparting a first phase shift to light passing therethrough, said third and fourth light transmissive regions substantially horizontally oriented and oppositely located and imparting a second phase shift to light passing therethrough.

8. The plate of Claim 1 wherein said second phase shift differs from said first phase shift by between 45 degrees and 315 degrees.

9. The plate of Claim 8 wherein said second phase shift differs from said first phase shift 180 degrees.

10. The plate of Claim 1 wherein said first and second light transmissive areas have a first thickness and said third and fourth light transmissive area have a second thickness and the difference between said first and second and said third and fourth light transmissive areas is equal to $1/(2n_{ref})$ wavelengths of an illuminating light source.

11. A plate aperture for use in a photolithographic system, comprising:

a plate including:

an opaque region in the center of the plate;

a first light transmissive region;

a second light transmissive region located substantially opposite said first light transmissive region;

a third light transmissive region; and

a fourth light transmissive region located substantially opposite said third light transmissive region;

wherein light passing through said third and fourth light transmissive regions is phase shifted by a phase difference from light passing through said first and second light transmissive regions.

12. The aperture plate of Claim 11 further comprising a second opaque region located along an outer portion of said plate and wherein said opaque region and second opaque region define an annular region therebetween.

13. The aperture plate of Claim 11 wherein said first, second, third, and fourth light transmissive regions are formed within said light transmissive region.

14. The aperture plate of claim 11 wherein said plate is formed of glass.

15. The plate of Claim 11 wherein said opaque region is comprised of a chromium film.

16. The plate of Claim 11 wherein said first and second light transmissive regions have a first thickness and said third and fourth light transmissive regions have a second thickness.

17. A system for projection lithography comprising:

a light source for illumination;

a photomask having formed thereon a pattern;

a focusing lens adjacent to said photomask and aligned to be illuminated by light passing through said photomask; and

an aperture comprising:

a plate;

an opaque region located substantially at the center of said plate; and

a first light transmissive area that imparts a first phase shift to light passing therethrough and a second light transmissive area, which imparts a second phase shift to light passing therethrough.

18. The system of Claim 17 wherein said first light transmissive area comprises a first and second sector being substantially vertically aligned and located substantially oppositely on said plate and wherein said second light transmissive area comprises a third and fourth sector being substantially horizontally aligned and located substantially oppositely on said plate.

19. The system of claim 18 wherein said first phase shift or said second phase shift is zero degrees.

20. The system of claim 17 wherein said first phase shift and said second phase shift differ by between 45 and 315 degrees.

21. The system of claim 17 wherein said aperture comprises an annular aperture and said first and second light transmissive areas are formed within a light transmissive annular region of said aperture.

22. A method of photolithographically imposing a pattern on a semiconductor wafer, comprising the steps of:

coating the wafer with a resist layer;

providing a coherent light illumination source;

deriving incoherent light from said illumination source by passing light from said illumination source through an aperture, the aperture having a opaque region in its center and having a first light transmissive area that imparts a first phase shift on light passing therethrough and a second light transmissive area that imparts a second phase shift on light passing therethrough;

passing said incoherent light through a photomask having a pattern formed thereon; and

illuminating the resist layer with the incoherent light after the incoherent light has passed through said photomask.

23. The method of claim 22 wherein said first phase shift is zero degrees.

24. The method of claim 22 wherein said first phase shift and said second phase shift differ by between 45 degrees and 315 degrees.